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ABSTRACT

The retention of ethnic minorities is a major problem in American colleges and universities. This study deals with the factors that affect adjustment to college and, in particular, to achievement of "bicultural efficacy" for this group. Bicultural efficacy is defined as an individual's expectations that he or she can (or cannot) manage the stress and conflict of living in two cultures at the same time without suffering negative psychological consequences or compromising his/her personal and cultural identity. Participants included 88 ethnic minority freshmen and a random sample of 30 Anglo freshmen from a private university in the West. Of these, 57 completed the study. Bicultural efficacy was assessed by the Bicultural Efficacy Scale, a sub-scale of the College Behavior Scale. Results of the study indicated that those students who have high bicultural efficacy scores have the perception of having adequate social support. A strong negative correlation was found between bicultural efficacy and both college adjustment and the grade point average. The study also found that the more a minority student was affiliated with Anglo culture the better was his/her college adjustment and academic performance. The findings support the hypothesis that academic success is a function of the individuation process. Included are 4 tables, 1 figure, and 21 references. (JB)

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Bicultural Efficacy and College Adjustment

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RUNNING HEAD: Bicultural Efficacy

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The retention of ethnic minorities is a major problem in American colleges and universities (Oliver, Rodriguez, & Mickelson, 1985). Baker and Siryk (1984) have demonstrated that a student's ability to adjust to the college environment is correlated to attrition rates, academic performance, appeals for psychological services, social activities, and involvement in leadership roles on campus. This article describes research that we hope will lead to a greater understanding of factors which affect adjustment to college for ethnic minorities.

A number of factors effect college adjustment. According to Sauber (1972), place of residence (e,g, living in a sorority, university-owed residence hall, or residence with parents) can have an impact on the type of problems a student experiences at college. Smith and Baker (1987) found that being more decided about a major facilitated freshman adjustment to college. Zitzow (1984) reported that the ability to effectively manage stressful life events is also predictive of an individual's ability to handle the college environment.

Several authors have looked at the role of family relations in a student's adjustment to college. Lopez, Campbell, & Watkins (1989) examined the role marital conflict and family coalition patterns have in this adjustment. They found that students from homes in which there was a great deal of conflict did not adjust as well to college as their peers from homes with low levels of marital conflict. They did not find, however, any interaction

between level of marital conflict or family coalitions patterns and a student's adjustment to college.

Another factor that has been associated with adjustment to college is Hoffman's (1984) theory of psychological separation. This theory suggests that the more emotional independence a student has from his or her parents, the better he or she will adjust to college. Lopez, Campbell, and Watkins (1986), however, did not find a significant correlation between psychological separation and adjustment to college. In other studies Lopez et. al. (1988, 1989) did demonstrate that psychological separation interacts with family structure and student's gender to effect adjustment to college. Lapsley, Rice, and Shadid (1989) found a pervasive relationship between psychological separation and at least the personal-emotional aspect of college adjustment. They also found a greater gender difference for psychological separation than did Lopez et. al. Although the pattern has not been clearly established, it seems clear that aspects of a student's ability to develop emotional independence from his or her parents does interact with the process of adjusting to college.

Few studies have been published that explicitly examine the impact of ethnicity or socio-economic status on a student's adjustment to college. One such study, Oliver et. al., looked at factors that might account for the fact that ethnic minority students have lower grades and graduate less often than majority

students. Specifically they examined the impact of academic preparation, class, and culture on Hispanic and African-American students' social adjustment to a predominately White university. They found that middle-class Hispanics who had a strong secondary education were less alienated, had better faculty relationships, and encountered less ethnic discrimination than lower-class Hispanics or African-Americans from either middle or lower-class backgrounds. These authors argue that middle-class Hispanics have better adjustment to college than their lower-class and African-American peers for two reasons. The first is that they possess the academic and social skills necessary to be actively and successfully involved with Anglo students and faculty members. The second reason for their effective adjustment is that they "... do not necessarily signal their non-Anglo status. Middle class Chicanos, in fact, often speak, dress, and physically appear to be Anglo" (p. 18). The authors point out that this does not mean that middle class Hispanics are better acculturated or more assimilated than the other groups, but that they receive better treatment from the majority members of the community. This allows the middle class Hispanic student to feel more a part of the university; a feeling which appears to facilitate their social adjustment. This process does not appear to be available for African-Americans or lower-class Hispanics who experience significant levels of discrimination. This interpretation is supported by Watkins and Terrell (1988) who

found that cultural mistrust interfered with the development of a positive relationship between White counselors and Black clients. They report that experience with racial discrimination is highly correlated with level of cultural mistrust.

Fernandez-Barillas and Morrison (1984) found that cultural affiliation does have an impact on a student's adjustment to college. While looking at male Hispanic students who were either monoculturally affiliated (either primarily with Anglo or Hispanic cultures) or biculturally-affiliated, they found that bicultural students reported less stress and less interference from stress in interpersonal relations than did their monocultural peers. There were no differences between the bicultural and monocultural students in terms of academic stress, familial relationships, or grade point average (GPA). There was, however, a significant difference in GPA between those students who were monocultural Hispanic-affiliated and those who were monocultural Anglo-affiliated, with those students who were Hispanic-affiliated performed better than those who were Anglo-affiliated. There was no significant difference between the bicultural group's GPA and either of the monocultural groups. As Fernandez-Barillas and Morrison point out,

> ... a bicultural affiliation appeared to foster greater interpersonal adjustment to the college environment than a monocultural affiliation with the minority culture ... a

> monocultural affiliation with the minority culture was related to a higher grade point average than a monocultural identity with the majority culture (p. 858).

Taken together, the Oliver et. al. and Fernandez-Barillas and Morrison studies suggest that being bicultural may facilitate the adjustment of ethnic minority students to predominately White colleges and universities. In a review of the literature on biculturalism, LaFromboise, Coleman, and Gerton (1991) reported substantial evidence in support of the hypothesis that developing bicultural competence may be a key to managing the stress of living in two cultures. These authors suggest that bicultural competence is a construct of seven dimensions. These dimensions are (a) communication ability, (b) role repertoire, (c) cultural awareness and knowledge, (d) beliefs and values, (e) level of personal identity development, (f) a sense of being grounded or bicultural efficacy, (g) positive attitudes towards both cultures, and (h) acceptance by both groups. LaFromboise et. al. hypothesized that an individual who can demonstrate competence in each of these area will be better able to adjust, at a personal and social level, to a new cultural environment than an individual who has a lower level of competency in these seven dimensions. They also argue, however, that more research needs be done on each component of bicultural competence in order to test their hypothesis. The purpose of this study is to determine

the role of one of these components, bicultural efficacy, in the adjustment of ethnic minority students to a predominately White university.

Bicultural efficacy is defined as an individual's expectations that they can or cannot manage the stress and conflict of living in two cultures at the same time without suffering negative psychological consequences or compromising their personal and cultural identities. One important aspect of bicultural efficacy is the ability to recruit and effectively use external support systems. The present study examined two hypotheses. The first is that students who have high bicultural efficacy will be better adjusted to college than individuals who have low bicultural efficacy. The second is that students with high self-efficacy will report having effective support systems in their home community and at the university. We were also interested in understanding the manner in which the interaction between ethnicity and class effected a student's college adjustment and development of effective support systems.

Method

Subjects

All ethnic minority freshmen (N=88) and a random sample of Anglo freshmen (N=30) from a private university in the West were recruited to participate in this study. Fifty-seven subjects completed the study. The final sample included 19 Hispanic/Latinos, 17 Anglo Americans, 16 African Americans, and 5

American Indians. Ethnicity was determined by the self-designation of the subjects.

Instruments and Procedure

Bicultural efficacy was asssessed in this study, by the Bicultural Efficacy Scale (BES; See Table 1) which is a sub-scale of the College Behavior Scale developed for use by LaFromboise (1990). The BES consists of 12 items that subjects respond to in a 11-point Likert format from uncertain to certain. The items are worded to yield the degree to which the respondent is confident they can manage issues surrounding bicultural conflict such as not compromising one's identity or getting along with individuals from one's home community and from the university. High scores on the BES represent a greater sense of self-efficacy in dealing with bicultural stress and conflict.

Insert Table 1 about here

Adjustment to college was assessed with the Student Adaption to College Questionnaire (SACQ; Baker and Siryk 1986). The SACQ is a 67-item self-rating inventory on which subjects respond to a 9-point Likert format from applies closely to me to doesn't apply at all to me. This instrument uses four sub-scales to assess a student's adjustment to college. These sub-scales are (a) academic adjustment with 24 items referring to educational demands, (b) social adjustment with 20 items referring to

interpersonal-societal demands in the college environment, (c) personal/emotional with 15 items referring to the student's psychological and physical feelings about college, and (d) goal commitment/institutional attachment with 15 items assessing the student's general feelings about being in college and about being at the particular college at which they are in attendance. Baker and Siryk report the following coefficient alphas: full scale = .91 and .92, academic adjustment = .82 and .87, social adjustment = .87 and .87, personal/emotional = .79 and .82, and attachment = .81 and .89. In this sample, only the reliability estimates for the personal/emotional subscale, which we labelled Personal Adjustment to College, was found to be acceptable. So it is the only part of the SACQ that we used in the analysis.

The student's perceived availability of potential social support was assessed by the Interpersonal Support Evaluation List (ISEL; Cohen, Sherrod, & Clark, 1986). The ISEL is a 48-item self-rating scale using a 4-point Likert format from definitely false to definitely true. The items are counter-balanced for desirability to avoid stimulating a response set. This instrument uses sub-scales to assess perceived availability of support in four areas. The "tangible" subscale measures perceptions of availability of material aid from others. The "appraisal" subscale measures perceptions of having someone to talk to about problems. The "self-esteem" subscale measures perceptions concerning the potential for a positive comparison

between self and others. The "belonging" subscale measures perceptions as to the availability of others with whom to do things. Cohen and Hoberman report the following coefficient alphas: full scale = .90, tangible = .65, belonging = .71, appraisal = .89, and self-esteem = .61.

Level and type of acculturation was assessed by using ethnic specific adaptations of the Acculturation Rating Scale for Mexican Americans (ARSMA; Cuellar, Harris, & Jasso, 1980.) This scale was designed to differentiate five levels of acculutration, (a) monocultural affiliation with subject's ethnic group, (b) ethnic-oriented bicultural, (c) "true" bicultural, (d) Anglo-oriented bicultural, and (e) very Anglicized. The version of the ARSMA used in this study is an 18-item self-rating scale using a 5-point Likert format from 0 (almost exclusively the subjects ethnic group) to 5 (almost exclusively Anglos or other ethnic groups). The higher a subject's score, the higher their level of acculturation into Anglo culture. Cuellar et. al. report a coefficient alpha of .88 for normal subjects and .81 for hospitalized psychiatric patients. These authors report information about the scales validity.

Socio-economic status (SES) was determined by using a variation on Duncan's Socioeconomic Index (SEI; 1961) and the revised scoring developed by Fetterman and Stevens (1982). Each participant's index score was acquired by taking an average of their parent's rating on the SEI. The distribution of this

average, which ranged from 0 to 89, was then divided into three groups at the 33rd and 66th percentiles to establish Low (0-26.9), Middle (27-53.9, and High (54-89) SES for each respondent.

Subjects were administered these self-report instruments over six monthly data collection sessions.

Analysis

In the first step of the analysis, we calculated the reliability estimates for this sample on the BES, SACQ, and ISEL. Then multivariate tests of differences between the Anglo and Minority groups were carried out on Grade Point Average (GPA) and Personal Adjustment to College (PAC) together with BES. We expected to find some evidence of group differences in the data, and we were especially interested in any indication of Ethnicity-by-SES interaction. The last step in the analysis involved a series of canonical correlation analyses were conducted. Our questions here involved the extent to which the "set" of college adjustment variables - GPA, and Personal Adjustment to College - could be predicted or "explained" by other constellations of variables. These were the measures of bicultural efficacy, perceptions of available support, and, for the minority sample, acculturation

There are a number of tests of significance available for this multivariate procedure. In the cases where the first characteristic root was much larger than the other roots, we followed Harris' (1977) recommendation that the Greatest

Characteristic Root (GCR) tests rather than the likelihood ratios tests be used. Harris noted that, under these conditions, the power (or the probability of finding a significant effect when one does in fact exist) of the GCR tests is greater than that for the likelihood ratio tests.

Results

Reliability Estimates for the BES, SACQ and ISEL

The reliability estimates for these scales based on the sample used in this study are reported in Table 2. The BES was found to have adequate internal consistency. The reliability estimates for the SACQ, however, were relatively disappointing. Given the low reliability estimates of most of the sub-scales for this sample, we only used the Personal Adjustment to College sub-scale in our analysis. The reliability estimates for the ISEL's full and sub-scales were considered adequate for use in this study.

Insert Table 2 about here

Descriptions and Differences across Groups.

The means and standard deviations for the different scales broken down by Ethnicity and SES are available from the first author.

Insert Table 3 about here

The correlations among the three variables were examined and are reported in Table 3. Bicultural Efficacy and Personal Adjustment to College were significantly and negatively correlated, $r = -0.39$, $p = 0.004$, indicating that students who reported high levels of bicultural efficacy tended to score at relatively low levels on the PAC. An Ethnicity X SES Manova was carried out to assess group differences on GPA, the PAC, and BES. A multivariate interaction effect of Ethnicity and SES emerged, $F(18, 102.31) = 1.68$, $p = 0.06$, and the univariate analysis for the PAC reflected a similar effect, $F(6, 38) = 5.93$, $p = 0.006$. This interaction was not apparent on either the GPA or BES measures. Figure I represents the interaction between scores on the PAC and SES of the participants. On average, study participants who were Middle SES reported higher personal adjustment to college scores than their low or high SES counterparts. Only Native Americans (a very small group in our sample) reported PAC scores which operated against this trend, with High SES Native Americans indicating the highest level of personal adjustment to college, over the three other groups.

Insert Figure I about here

A significant main effect for SES emerged on the BES, F (2, 38) = 5.93, p = 0.006, where post hoc comparisons using Tukey's procedure indicated that the BES scores for the Low SES group were significantly higher than for the Middle, $p < 0.10$, or High, $p < 0.05$, SES groups. These latter groups were not significantly different from each other. Main effects for both Ethnicity, F (3, 38) = 2.94, p = 0.05, and SES, F (2, 38) = 3.26, p = .05 emerged for GPA. In this case, post hoc multiple comparisons indicated that (a) the Anglo group had a higher average GPA than all three minority groups, and (b) there was also a significant difference between the High and Low SES groups, with the latter having lower GPA's.

Canonical Correlation Analyses

Canonical correlation analysis can be used to investigate a number of different kinds of research questions. Here we were interested in examining the extent to which various constellations of behavioral and personal efficacy variables were predictive of adjustment to college. The canonical correlation procedure finds a linear combination, called a canonical variable, from each variable set, so that the correlation between these two canonical variables is maximized. Successive pairs of canonical variables are found, subject to the restriction that they are uncorrelated with the previous pairs. Once formed, these variables may be interpreted by examining their correlations with the original variables. In this study,

associations were examined between two dimensions of college adjustment - GPA and PAC - and the five behavioral efficacy measures - the BES and the four sub-scales of the ISEL.

As in many social science studies, a tension existed in this study, between a relatively small sample size and the search for stable and interpretable results. This particular data set allowed us to address this issue in the following manner. When the full sample was being examined, allowing more latitude in terms of numbers of variables included in the analysis, we used the full ISEL, its four subscales and the BES. When examining the Anlgo or Minority sub-samples, only the full ISEL was included with the BES. In all analyses, the Reaction to College set of variables consisted of GPA and the PAC sub-scale of the SACQ. The results of the various analyses are reported in Table 4.

Insert Table 4 about here

Efficacy and Reaction to College: Whole Sample.

Using the full ISEL and the BES in the analysis, we found that bicultural efficacy was negatively associated with the PAC scale, $r = -0.39$, $p = 0.004$, as was the ISEL, $r = -0.40$, $p = 0.003$. Neither of the efficacy measures appeared to be highly linearly associated with GPA, but, as expected, there was a significant and positive linear association between the efficacy

scales, r = 0.31, p = 0.03. This association indicates that students scoring high on the BES tended to perceive higher levels of available support in their environments. Here a significant initial canonical correlation of 0.496, F (4, 96) = 4.19, p = 0.004, was revealed, with the second canonical correlation being 0.196, F (1, 49) = 1.96, p = 0.17. These correlations indicated that our dimensions of college adjustment were significantly related to these efficacy measures. The specified linear combination of bicultural efficacy variables in the first canonical variate accounted for about 25% of the total variation in the specified linear combination of GPA and PAC. (Because these variables were not measure in the same units, we interpreted the standardized rather than the raw canonical coefficients). The first canonical variable for the Reaction to College measures was dominated by the PAC scale, with a negative weighting, while GPA contributed much more strongly to the second canonical variable. The first canonical variable of the efficacy measures was a linear combination of the BES and ISEL. In the second there was a difference in the contribution of the ISEL and BES measures, with slightly more weight being given to the ISEL.

The correlations between the original variables and their canonical variables reflect the degree to which a variable is represented by its canonical variable, and are useful in interpreting the substantive content of the canonical variables. Inspection of these correlations show that PAC is highly and

negatively correlated with the first canonical variable, whereas both the ISEL and the BES are highly correlated with this variable. GPA and ISEL are both highly correlated with the second canonical variable. These results confirm the bivariate indications that those respondents who reported low levels of personal adjustment to college nevertheless tended to report high levels of bicultural efficacy and perceptions of social support. Students who indicated perceptions of high levels of available support also tended to have higher GPA's than those who expressed a perception of a lack of social support.

When the four sub-scales of the ISEL were used in the analysis, the bivariate correlations indicated fairly strong linear relationships between PAC and Belonging, $r = -0.45$, $p < 0.001$, Appraisal, $r = -0.36$, $p < 0.01$, and Self-Esteem, $r = -0.49$, $p < 0.001$. Self-Esteem was also positively correlated with the BES, $r = 0.50$, $p < 0.001$. When we included the ISEL sub-scales in the analysis, the first canonical correlation was increased substantially to 0.74, $F\ (10, 90) = 5.1667$, $p < 0.001$, indicating a highly significant relation between the Efficacy and Personal Reaction to College set of measures. The loadings for the Reaction to College measures were essentially unchanged in this analysis. The BES dominated the second canonical variable, along with a strong contribution coming from the Self-Esteem sub-scale. The patterns of correlations indicated that students scoring low on the PAC tended to score fairly high on the Self-

Esteem, Belonging, and Appraisal sub-scales of the ISEL. Those students with high GPA's tended to report fairly low levels of bicultural efficacy. The squared multiple correlations indicated that the Self-Esteem sub-scale has some predictive power for Reaction to College (27%), as did the Belonging sub-scale (20%).

Efficacy and Reaction to College: Sub-Samples.

Similar analyses were carried out using the Anglo and Minority sub-samples. Due to the small number of Anglos (n-17) in the study, the relationships between the sets of variables were to difficult to decipher. PAC was still negatively correlated with both BES, $r = -0.51$, and ISEL, $r = -0.54$, while these two efficacy scales were positively correlated with each other, $r = 0.76$. Although a fairly strong first canonical correlation of 0.56 was obtained in this analysis, it was not significant, $F\ (2, 13) = 2.968$, $p = 0.09$. Once again, score on PAC negatively dominated the first Reaction to College canonical variable, with GPA contributing strongly and positively to the second. The first Bicultural Efficacy canonical variable was a linear combination of the BES and ISEL. The pattern of correlations indicated that Anglo students reporting low levels of bicultural efficacy and perceptions of support tended to report high levels of personal adjustment to college.

In a similar analysis examining the Minority sub-sample ($n = 36$), the first canonical correlation of 0.46 was significant, $F\ (2, 33) = 4.34$, $p = 0.02$. Again, the pattern of correlations

showed that minority students scoring high on BES and the ISEL tended to report quite low levels of personal adjustment to college. As in the Anglo sub-sample, the higher the GPA the more likely it was that a student showed a tendency to report a low level of bicultural efficacy. When the Acculturation scale was added to the efficacy set of predictors, the canonical correlation increased only fractionally. This scale did, however, indicate that minority students who reported high levels of personal adjustment to college also tended to show relatively high levels of acculturation into the Anlgo culture. The correlation between BES and GPA for minorities was $r = -0.16$, which is not significant.

Discussion

This study had two hypotheses, one of which received support from the data. The first hypothesis, that ethnic minority students who report a high level of bicultural efficacy would feel well adjusted to college was not supported. The second hypothesis, that those students who have a high level of bicultural efficacy would have a sense that they had a supportive social network was supported in this study. In the rest of this paper we will identify what bicultural efficacy may be able to explain about adjustment to college. We will also discuss the impact of SES on the results of this study, the limitations of the study. and suggestions for further research on the relationship between bicultural efficacy and college adjustment.

It is clear from the results of this study that those students who have high bicultural efficacy have the perception of having adequate social support. These students also tend to come from the lower SES group in this sample, to have lower GPA's and report a lower level of adjustment to college than do those students who report having lower bicultural efficacy. This latter group tends to belong to the middle and upper SES groups in this sample and have better grades. This study suggests that there is a strong negative correlation between bicultural efficacy and both college adjustment and GPA.

These findings hold true for both Anglo students and ethnic minority students. When an assessment of acculturation was added to the analysis it became clear that the more a minority student was affiliated with Anglo culture the better their college adjustment and their GPA. This cultural affiliation also appears to be mediated by the minority student's social class, i.e., the higher his or her SES, the higher his or her level of acculturation. This finding gives support to the hypothesis generated by Oliver et. al. that adjustment to college and academic performance at predominately Anglo institutions maybe more a function of SES than of ethnicity.

The finding that those students, both Anglo and Minority, who feel well adjusted to college and have higher GPA's also have the perception that they do not have a lot of social support may be related to a variable that is an important component of

successful achievement within American colleges and universities. As Hoffman's theory of psychological separation suggests, those individuals who perceive themselves as separate from their families and home communities adjust well to college and perform well once there. The fact that students, both Anglo and Minority, who report experiencing less social support outperform and feel better adjusted to college than those who report having good social support systems, supports the hypothesis that academic success is a function of the individuation process. This hypothesis raises a number of interesting questions about adjustment to college for ethnic minorities. If it is the case that being more individuated when one is entering college will facilitate their adjustment, what role does familiarity with the culture of that college play in the adjustment? Would an Anglo student who appears to be psychologically separated according to Hoffman's criteria adjust as rapidly to a predominately minority oriented college as he or she appears to do on a predominately Anlgo campus? Another important question deals with the role of pre-freshman experience with the culture of the college in facilitating or constraining adjustment. It seems, from this study, that those students who perform well and adjust rapidly, all come from higher SES groups than those who do not adjust or perform as well. In what way does high school and other aspects of pre-college training experience differentially prepare students for college?

Initially, these findings may suggest that bicultural efficacy is not a good predictor of college adjustment or academic performance. Given, however, the interaction between SES and bicultural efficacy, this assumption needs to be carefully examined. We suggest that bicultural efficacy may be a part of what helps students from less advantaged social or educational backgrounds get into predominately Anglo and upper class institutions. We hypothesize that, without a high level of bicultural efficacy, students from lower SES groups would not attend or stay in predominately Anglo colleges or universities. Furthermore, we speculate that the difference in performance (GPA) between students who report having high bicultural efficacy and those who report having lower bicultural efficacy may decrease as a function of time in college. In other words, as a student becomes more competent within the college culture, his or her performance will improve. It may well be that BCE may be a predictor of retention in college and/or improvement in performance from freshman to junior or senior year.

Before drawing too many conclusions from this study, however, several methodological limitations need to identified. The first is that the relatively small sample size suggests caution in interpreting this results as stable or generalizable. A problem associated with this small sample size is that we had to create a minority grouping in order to complete some of the analyses. We recognize that any generalizations of these results

to specific minority groups need to be made with great caution. We believe these results suggest definite trends but they need further study before any concrete generalizations can be made. Another concern is the poor reliability estimated for the SACQ in this sample. Given that we were only able to use one sub-scale in our analyses, the PAC, we wonder if we had a adequate measure of college adjustment. In other words, a more reliable instrument may lead to a replication of these results or it may have demonstrated a higher correlation between bicultural efficacy and college adjustment. We believe that these limitations do not invalidate the results, just that have led us to be conservative in our interpretation of their meaning.

In summary, this study initiated an understanding of the impact bicultural efficacy has on college adjustment and performance. The results of this study suggest that college students who report having high bicultural efficacy also report experiencing a great deal of social support, but are less well adjusted to college than their peers who report not having good social support or feeling adjusted to college. These students also tend to come from lower SES groups. College students who report having lower bicultural efficacy and report having a lower level of social support, are well adjusted to college and have higher GPA's than their peers who report having higher bicultural efficacy. These students tend to come from middle and upper SES groups. Those minority students who are within this group, are

more acculturated than their peers who are in the other group. These results were interpreted to mean that freshman who are already competent in the college culture adjust faster and outperform their peers who are still learning that culture. It is also hypothesized that these students have already developed a sense of psychological separation from their home environment. The authors suggest that further research in this area, (a) examine the stability of these results by replicating the study with a larger sample, (b) examine the degree to which these results remain stable over time, i.e., do the differences remain after freshman from the lower SES groups or who are less acculturated, gain competence in the college culture, and (c) to what degree can beliefs about bicultural efficacy predict such factors as staying in college or improved academic performance over a college career.

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Table 1

The Bicultural Efficacy Scale

Please indicate how confident you are that you could do the following:

(Scored from 1 = uncertain to 10 = certain)

1) Maintain your academic workload without placing heavy strain on family relations.
2) Make your own choices without feeling guilty over traditional role expectations.
3) Handle racist or stereotypic behavior and attitudes with tact and diplomacy.
4) Manage your personal relationships without compromising your identity.
5) Be seen as getting along well with persons in your home community and persons at the university.
6) Communicate comfortably about your ethnicity and display certain aspects of it.
7) Satisfy academic requirements yet meet the expectations of ethnic/cultural organizations as well as general student organizations.
8) Balance extended family and community needs with academic demands.
9) Withstand extended periods of social isolation or geographic distance to pursue academic work.

10) Pursue your own intellectual interests when they conflict with the ethnic/cultural community priorities for education.

11) Convey the relevance of your academic work to the future goals of your ethnic/cultural community.

12) Maintain cultural values and beliefs even when they are not supported in the environment around you.

Table 2

Internal Reliability Estimates for the BES, SACQ and ISEL for the Total Sample and the Minority Sub-Sample

Measure	# of Items	Whole Sample	Minority Sub-Sample
Bicultural Efficacy			
Full Scale	12	0.75 (n=52)	0.76 (n=37)
Student Adjustment to College Questionnaire			
Full Scale	67	0.39 (n=54)	0.49 (n=36)
Sub-Scales:			
1. Academic Adjustment	24	0.01 (n=54)	0.22 (n=36)
2. Social Adjustment	20	0.30 (n=53)	0.41 (n=36)
3. Personal Adjustment	15	0.73 (n=53)	0.64 (n=37)
4. Goal Adjustment	14	-0.21 (n=53)	0.06 (n=37)

Interpersonal Support Evaluation List			
Full Scale	48	0.95 (n=56)	0.96 (n=39)
Sub-Scales			
1. Belonging	12	0.78	0.81
2. Appraisal	12	0.92	0.92
3. Self-esteem	12	0.88	0.89
4. Tangible	12	0.88	0.89
Rating Scale for Ethnicity (Acculturation)			
Full Scale	17	NA	0.75 (n=37)

Table 3

Correlation Matrix for the BES, GPA, PAC, ISEL, and ISEL Subscales*

	BES	GPA	PAC	ISEL	TANGIBLE	BELONG	APPRAISAL	ESTEEM
BES								
GPA	-0.19							
PAC	-0.39	0.19						
ISEL	0.30	0.01	-0.39					
TANGIBLE	0.09	-0.09	0.08	0.81				
BELONG	0.18	-0.01	-0.45	0.90	0.70			
APPRAISAL	0.20	0.11	-0.36	0.85	0.49	0.67		
ESTEEM	0.50	0.03	-0.49	0.88	0.62	0.76	0.71	

* Correlations that reach a $p < 0.01$ are underlined

Table 4

Standardized Canonical Coefficients and Canonical Correlations for Reaction to College and Behavioral Efficacy Measures (BES)

Standardized Canonical Coefficients and Canonical Correlations for Reaction to College and Behavioral Efficacy Measures (BES): The Whole Sample

Canonical Correlations:

	R1 = 0.49, p = 0.004		R2 = 0.19, p = 0.17	
	Standardized Coefficients	Correlations	Standardized Coefficients	Correlations
Reaction to College Measures				
GPA	-0.03	-0.22	1.02	0.97
PAC	-0.99	-0.99	-0.22	-0.03
Efficacy Measures				
BES	0.68	0.85	-0.80	-0.53
ISEL	0.55	0.76	0.89	0.65

Standardized Canonical Coefficients and Canonical Correlations for Reaction to College and Efficacy Measures including the ISEL Subscales: The Whole Sample

Canonical Correlations:

	R1 = 0.74, p < 0.001		R2 = 0.33, p = 0.24	
	Standardized Coefficients	Correlations	Standardized Coefficients	Correlations
Reaction to College Measures				
GPA	0.31	0.11	0.97	0.99
PAC	-1.01	-0.95	0.11	0.30
Efficacy Measures				
BES	0.22	0.49	-1.02	-0.71
Tangible	-0.71	-0.19	-0.30	-0.28
Belonging	0.64	0.61	-0.36	-0.15
Appraisal	0.16	0.54	0.43	0.31
Self-Esteem	0.38	0.70	0.62	0.01

Standardized Canonical Coefficients and Canonical Correlations for Reaction to College and Behavioral Efficacy Measures (BES): The Anglo Sub-Sample

Canonical Correlations:

R1 = 0.56, p = 0.09

	Standardized Coefficients	Correlations

Reaction to College Measures		
GPA	0.03	-0.25
PAC	-1.01	-0.99
Efficacy Measures		
BES	0.43	0.91
ISEL	0.63	0.96

Standardized Canonical Coefficients and Canonical Correlations for Reaction to College and Behavioral Efficacy Measures (BES): Minorities Sub-sample

Canonical Correlations:

R1 = 0.46, p = 0.02 R2 = 0.19, p = 0.28

	Standardized Coefficients	Correlations	Standardized Coefficients	Correlations
Reaction to College Measures				
GPA	-0.12	-0.08	0.99	0.99
PAC	-0.99	-0.99	-0.08	-0.12
Efficacy Measures				
BES	0.55	0.68	-0.86	-0.73
ISEL	0.75	0.84	0.69	0.54

Figure 1

Personal Adjustment to College, Ethnicity and SES

Figure 1

Personal Adjustment to College, Ethnicity and SES